

The opinion in support of the decision being entered today was *not* written for publication and is *not* binding precedent of the Board.

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* YOSHIYUKI MIYAMOTO

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Appeal 2006-2121  
Application 10/025,473  
Technology Center 1700

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Decided: September 26, 2006

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Before KRATZ, TIMM, and JEFFREY T. SMITH, *Administrative Patent Judges*.  
JEFFREY T. SMITH, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant appeals the decision of the Primary Examiner rejecting claims 1 to 8, all of the pending claims. We have jurisdiction under 35 U.S.C. § 134.<sup>1</sup>

We REVERSE.

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<sup>1</sup> An Oral Hearing took place on September 14, 2006.

## BACKGROUND

The invention on appeal is directed to a super conducting material comprising a C<sub>20</sub> fullerene and a method of producing the same. Claims 1 and 7, as presented in the Brief, are reproduced below:

1. A superconducting material comprising a structure wherein C<sub>20</sub> Fullerene molecules are polymerized into a one-dimensional chain.
  
7. A method for producing a superconducting material, comprising the steps of:
  - incorporating and polymerizing C<sub>20</sub> Fullerene molecules in a porous material which has a large band gap between a valence band and a conduction band;
  - mounting the porous material incorporating the C<sub>20</sub> Fullerene molecules on a semiconductor substrate doped with an acceptor or a donor; and
  - applying electric field to the porous material.

The Examiner rejected claims 1 to 8 under 35 U.S.C. § 112, first paragraph for lack of an enabling disclosure (Answer 3-6).

## OPINION

It is well settled that the burden of proof lies upon the United States Patent and Trademark Office (USPTO) in calling into question the enablement of an Applicant's disclosure. This burden requires the USPTO to advance acceptable reasoning inconsistent with the enablement. Upon the advance of acceptable reasoning, the burden shifts to the Applicant to show that one of ordinary skill in the art could not have practiced the claimed invention without undue experimentation. *In re Strahilevitz*, 668 F.2d 1229, 1232, 212 USPQ 561, 563 (CCPA 1982).

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The Examiner has not carried his initial burden of proof. In explaining his rationale for making the rejection before us, the Examiner states that

In the instant specification, applicant has not specifically disclosed **conclusive evidence** that the claimed materials have been produced (or methods of making such materials). Applicant alludes to critical temperatures above 180K (page 6, Fig 3), but no ‘hard data’ has been provided (actual temperatures vs. resistivity plots, photomicrographs, etc.) to support applicant’s contention of such incredible superconductive properties. In fact no inventive examples appear in the specification. It is unclear if applicant has produced C<sub>20</sub> fullerene molecules polymerized into a one-dimensional chain, or if such is only a theoretical discussion. [Answer 4].

The Examiner further states “It should be noted that at the time the invention was made, the theoretical mechanism of superconductivity in these materials was not well understood. (This is still the case today).” (Answer 5). In order to support his stated position the Examiner refers to a lecture by a Professor Chu in a lecture at the Patent and Trademark Office held on October 7, 1987 (Answer 6). However, the Examiner has not presented a transcript of this lecture.

Rather than carrying his initial burden of establishing a *prima facie* case, the Examiner has inappropriately leaped to the conclusion that the specification, as originally filed, does not provide an enabling disclosure for the invention as now claimed. The first paragraph of § 112 requires nothing more than an objective enablement. As stated above, the Examiner has not provided a transcript of the lecture by Professor Chu. Thus, the Examiner has not provided persuasive evidence to support his reason for doubting the assertions in the specification as to

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the scope of enablement.<sup>2</sup> The Examiner appears to be concerned that Appellant has not produced a C<sub>20</sub> Fullerene molecule polymerized into a one dimensional chain. The Examiner asserts that the Appellant has only provided simulated results in the Example contained in the specification. (Answer 4-5). However, the Examiner has not directed us to evidence or provided convincing reasoning that establishes the subject matter of the appealed claims is in an unpredictable art and/or that undue experimentation would be required. As such, the Examiner has not provided a basis for questioning the presumption of an enabling disclosure. Thus, the Examiner has inappropriately required the Appellant to carry the initial burden of proving that the claimed subject matter is enabling.

In essence rather than carrying the initial burden of establishing a prima facie case of enablement, the Examiner has inappropriately leaped to the conclusion of nonenablement.<sup>3</sup> In light of the foregoing we cannot uphold the Examiner's § 112, first paragraph, rejection of the appealed claims.

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<sup>2</sup>It is noted that the Examiner cites an article to Margadonn on page 10 of the Answer. This reference has not properly been cited and relied upon by the Examiner in the statement of the rejection. The Examiner has also not provided an explanation as to the relevance of the teachings of the cited article directed to high pressure polymerization of Li-Intercalated Fulleride Li<sub>3</sub>CsC<sub>60</sub> is relevant to a C<sub>20</sub> Fulleride material.

<sup>3</sup>The Examiner's discussion of the factual inquiries as listed in *In re Wands*, 858 F.2d 731, 737, 8 USPQ2d 1400, 1404 (Fed. Cir. 1988), in the Office action mailed December 26, 2001 has been noted. However, the Examiner has not provided evidence or convincing reasoning to support the allegations stated in the Office action.

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## CONCLUSION

The rejection of claims 1 to 8, as unpatentable under 35 U.S.C. § 112, first paragraph for lacking enabling disclosure is reversed.

REVERSED

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